

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-18 (canceled)

Claim 19 (new): A method for medical monitoring of a patient using four extremity electrodes and up to six additional electrodes, wherein said method comprises the steps of:

attaching electrodes to the patient in a manner to obtain up to 5-lead EKG signal data using an electrode selection made from the extremity electrodes and at least one  
5 additional electrode;

attaching at least some of the remaining additional electrodes to the patient in a manner suitable for obtaining a selected one of 12-lead EKG signal data, EEG signal data, and IKG signal data; and

obtaining up to 5-lead EKG signal data and the selected signal data from the  
10 electrodes attached to the patient.

Claim 20 (new): The method according to claim 19 wherein the ten electrodes are used for obtaining the signal data and the electrode configuration used for obtaining the signal data is selected based on the data to be obtained.

Claim 21 (new): The method according to claim 19 further comprising the step of operating a selector switch (K) for selecting the signal data to be obtained.

Claim 22 (new): The method according to claim 21 further comprising the steps of:  
attaching remaining, additional electrodes to the patient in a manner suitable  
for obtaining 12-lead EKG signal data; and  
operating the selector switch (K) to a first position (I).

Claim 23 (new): The method according to claim 21 further comprising the steps of:  
attaching remaining, additional electrodes to the patient in a manner suitable  
for obtaining EEG signal data; and  
operating the selector switch (K) to a second position (II).

Claim 24 (new): The method according to claim 21 further comprising the steps of:  
attaching remaining, additional electrodes to the patient in a manner suitable  
for obtaining IKG signal data; and  
operating the selector switch (K) to a third position (III).

Claim 25 (new): The method according to claim 19 further comprising the steps of:  
attaching remaining, additional electrodes to the patient in a manner to obtain  
EEG signal data from the patient;  
attaching electrodes to the patient in a manner to obtain EMG signal data from  
5 the facial region of the patient; and  
obtaining EEG and EMG signal data from the electrodes attached to the  
patient.

Claim 26 (new): The method according to claim 19 further comprising the steps of:  
attaching remaining, additional electrodes to the patient in a manner to obtain  
EEG signal data; and  
calculating, from the obtained signal data, an index describing a depth of the  
5 anesthesia of the patient.

Claim 27 (new): The method according to claim 19 wherein EKG signal data and EEG  
signal data are obtained and the electrodes used to obtain EKG signal data and the electrodes  
used to obtain EEG signal data include a common neutral electrode.

Claim 28 (new): The method according to claim 19 further comprising the steps of:

determining impedance relations among the electrodes; and  
ascertaining from the impedance relations the manner in which the electrodes are attached to the patient.

Claim 29 (new): The method according to claim 19 further defined as comprising the step of:

deriving 3-lead EKG signal data and 2-lead EEG signal data from the electrodes attached to the patient in the first described step of the method.

Claim 30 (new): A system for medical monitoring apparatus comprising:

an electrode set including four patient extremity electrodes adapted to be attached to a patient (P);

six additional electrodes adapted to be attached to a patient (P), one of said  
5 electrodes being includable in said electrode set;

signal conductors connected to said electrodes;

measuring equipment comprising electrocardiographic (EKG) measuring equipment and at least one of an electroencephalographic (EEG) and impedance cardiographic (IKG) measuring equipment; and

10 a selector switch (K) interposed between said conductors and said measuring equipment for selecting the measurement to be carried out such that said electrode set provides an up to 5-lead EKG signal data to said electrocardiographic (EKG) measuring equipment, and the additional electrodes provide a selected one of 12-lead EKG signal data to said electrocardiographic (EKG) measuring equipment when said selector switch is in a  
15 first position (I), EEG signal data to said electroencephalographic (EEG) measuring equipment when said selector switch is in a second position (II), or IKG signal data to said impedance cardiographic (IKG) measuring equipment when said selector switch is in a third position (III).

Claim 31 (new): The system according to claim 30 further comprising:

preamplifier means coupled to said additional electrodes, said preamplifier means providing signals for the 12-lead EKG signal data, said preamplifier means having means coupled to selected ones of said additional electrodes for use in obtaining IKG signal data when the operation of said system is transferred from obtaining 12-lead EKG signal data to obtaining IKG signal data.

Claim 32 (new): The system according to claim 30 further comprising:

preamplifier means coupled to said electrodes for determining impedance relations among the electrodes for use in ascertaining the manner in which the electrodes are attached to the patient.